Claims

[c1]   What is claimed is:

1. A method of accessing an encrypted instruction, the method comprising:

utilizing an instruction access controller (IAC) to access the encrypted instruction;

utilizing a microprocessor to drive the instruction access controller to access the encrypted instruction;

decrypting the encrypted instruction to generate a decrypted instruction; and

utilizing the microprocessor to operate according to the decrypted instruction.

[c2]   2. The method of claim 1, wherein the step of decrypting the encrypted instruction further comprises:

providing a register module; and

driving the register module to store the encrypted instruction accessed by the instruction access controller according to an address provided by the instruction access controller.

[c3]   3. The method of claim 1, further comprising:

providing a key storage unit for storing a key;

wherein the step of decrypting the encrypted instruction

further comprises reading the key to decrypt the encrypted instruction.

[c4]   4. The method of claim 1, further comprising:

providing a key storage unit for storing a key;

wherein the step of accessing the encrypted instruction further comprises reading the key to decrypt the access address of the encrypted instruction

5. The method of claim 1, further comprising:

locating the instruction access controller and the microprocessor in a chip;

wherein the encrypted instruction is stored in a storage apparatus connected to the chip.

[c5]   6. The method of claim 1, wherein the encrypted instruction is stored in a storage apparatus, the method further comprising:

locating the storage apparatus, the instruction access controller, and the microprocessor in a chip.

[c6]   7. An instruction access system comprising:

a storage apparatus for storing an encrypted instruction;

an instruction access controller (IAC) electronically connected to the storage apparatus for accessing the encrypted instruction from the storage apparatus;

a decryption module electronically connected to the storage apparatus for decrypting the encrypted instruc-

tion to generate a decrypted instruction; and

a microprocessor electronically connected to the instruction access controller and the decryption module for driving the instruction access controller to control the storage apparatus to transmit the encrypted instruction to the decryption module, the microprocessor receiving the decrypted instruction from the decryption module to operate.

[c7] 8. The instruction access system of claim 7, further comprising:

a register module electronically connected to the instruction access controller, the storage apparatus and the decryption module for storing the encrypted instruction according to an address provided by the instruction access controller and transmitting the encrypted instruction to the decryption module.

[c8] 9. The instruction access system of claim 8, wherein the register module functions as a cache memory.

[c9] 10. The instruction access system of claim 7, further comprising:

a key storage unit electronically connected to the decryption module for storing a key;

wherein the decryption module reads the key to decrypt the encrypted instruction.

[c10]   11. The instruction access system of claim 7, further comprising:

a key storage unit electronically connected to the instruction access controller for storing a key;

wherein the instruction access controller reads the key to decrypt the access address of the encrypted instruction.

[c11]   12. The instruction access system of claim 7, wherein the instruction access controller, the decryption module, and the microprocessor are located in a chip, and the storage apparatus is connected to the chip.

[c12]   13. The instruction access system of claim 12, wherein the storage apparatus is a non-volatile memory.

[c13]   14. The instruction access system of claim 12, wherein the chip is a controlling chip of a disc player, and the decrypted instruction is a firmware of the disc player.

[c14]   15. The instruction access system of claim 7, wherein the storage apparatus, the instruction access controller, the decryption module, and the microprocessor are located in a chip.

[c15]   16. The instruction access system of claim 15, wherein the storage apparatus is a volatile memory.

[c16]   17. The instruction access system of claim 15, wherein

the chip is a controlling chip of a disc player, and the decrypted instruction is a firmware of the disc player.